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OCT 14 2004

PATENTS

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of Richard GEISS *et al.*

Applicant: 1021 Technologies KK  
Serial No. 09/832,980 Group Art Unit 2643  
Filed: April 12, 2001 Examiner PHAM, Tuan  
Title: Method and Apparatus for Connecting Broadband Voice and Data Signals to Telephone Systems

REVOCATION AND APPOINTMENT  
OF ATTORNEY

Honorable Commissioner  
of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Attached hereto are a "Revocation of Power of Attorney with New Power of Attorney and Change of Correspondence Address" and a "Statement under 37 CFR 3.73(b)".

Also attached are copies of a (i) document evidencing that Mitel Corp. changed its name to Zarlink Semiconductor Inc. and (ii) an assignment transferring the rights in the above-identified patent application from Zarlink Semiconductor Inc. to 1021 Technologies KK, which were submitted for recordal earlier today.

Respectfully submitted

Date: 14 October 2004

P.O. Box 11100, Station H  
Ottawa, Ontario  
Canada. K2H 7T8  
Tel: (613) 254 9111  
Fax: (613) 254 9222  
Docket No. AP1103US

  
Thomas Adams, Reg. No. 31078

## CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office facsimile number 703 872 9306 on the date shown below.

14<sup>th</sup> October '04  
Date

  
Thomas Adams

PTO/SB/82 (08-04)

Approved for use through 11/30/2005. OMB 0851-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**REVOCATION OF POWER OF  
ATTORNEY WITH  
NEW POWER OF ATTORNEY  
AND  
CHANGE OF CORRESPONDENCE ADDRESS**

Application Number	09/832,980
Filing Date	April 12, 2001
First Named Inventor	GEISS, Richard
Art Unit	2643
Examiner Name	PHAM, Tuan
Attorney Docket Number	AP1103US

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint the practitioners associated with the Customer Number: 33361

☒ Please change the correspondence address for the above-identified application to:

☒ The address associated with  
Customer Number:

33361

OR

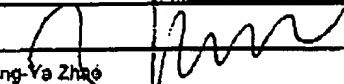
<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Fax		

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

**SIGNATURE of Applicant or Assignee of Record**

Signature			
Name	Ping-Ye Zhao		
Date	October 14, 2004	Telephone	613-271-3789

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.38. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/86 (09-04)

Approved for use through 07/31/2008. OMB 0861-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: 1021 Technologies KKApplication No./Patent No.: 09/832,980 Filed/Issue Date: April 12, 2001Entitled: Method and Apparatus for Connecting Broadband Voice and Data Signals to Telephone Systems1021 Technologies KK

(Name of Assignee)

, a corporation

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: LUNG, Joe and GEISS, Richard To: Mitel CorporationThe document was recorded in the United States Patent and Trademark Office at  
Reel 011713, Frame 0518, or for which a copy thereof is attached.2. From: Mitel Corporation To: Zarlink Semiconductor Inc.The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.3. From: Zarlink Semiconductor Inc. To: 1021 Technologies KKThe document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet.☐ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

  
\_\_\_\_\_  
SignaturePing-Ya Zhao

Printed or Typed Name

October 14, 2004

Date

613-271-3789

Telephone Number

CTO & Vice President R&D

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9198 and select option 2.



Industry Canada Industrie Canada

Canada Business Corporations Act Loi canadienne sur les sociétés par actions

# COPY

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OCT 14 2004

I HEREBY CERTIFY THAT THE  
ATTACHED IS A TRUE COPY OF THE  
DOCUMENT MAINTAINED IN THE  
RECORDS OF THE DIRECTOR.

JE CERTIFIE, PAR LES PRÉSENTES, QUE LE  
DOCUMENT CI-JOINT EST UNE COPIE  
EXACTE D'UN DOCUMENT CONTENU  
DANS LES LIVRES TENUS PAR LE  
DIRECTEUR.

Deputy Director - Directeur adjoint

Date



# Canada

**COPY**

Industry Canada

Industrie Canada

**Certificate  
of Amendment****Canada Business  
Corporations Act****Certificat  
de modification****Loi canadienne sur  
les sociétés par actions****ZARLINK SEMICONDUCTOR INC.****030203-1****Name of corporation-Dénomination de la société****Corporation number-Numéro de la société****I hereby certify that the articles of the  
above-named corporation were amended:****Je certifie que les statuts de la société  
susmentionnée ont été modifiés:**

- a) under section 13 of the *Canada Business Corporations Act* in accordance with the attached notice;
- b) under section 27 of the *Canada Business Corporations Act* as set out in the attached articles of amendment designating a series of shares;
- c) under section 179 of the *Canada Business Corporations Act* as set out in the attached articles of amendment;
- d) under section 191 of the *Canada Business Corporations Act* as set out in the attached articles of reorganization;



- a) en vertu de l'article 13 de la *Loi canadienne sur les sociétés par actions*, conformément à l'avis ci-joint;
- b) en vertu de l'article 27 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses modificatrices ci-jointes désignant une série d'actions;
- c) en vertu de l'article 179 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses modificatrices ci-jointes;
- d) en vertu de l'article 191 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses de réorganisation ci-jointes;

**Director - Directeur****July 25, 2001 / le 25 juillet 2001****Date of Amendment - Date de modification****Canada**

**COPY**

**CANADA BUSINESS  
CORPORATIONS ACT  
FORM 4  
ARTICLES OF AMENDMENT  
(SECTION 27 OR 177)**

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**OCT 14 2004**

**1 - Name of Corporation**

**MITEL CORPORATION/  
MITEL S.C.C.**

**2 - Corporation No.**

**030203-1**

**3 - The articles of the above-named Corporation are amended as follows:**

**Section 1 of the articles of incorporation be and the same is hereby deleted and replaced by the following:**

**1 - Name of the Corporation**

**ZARLINK SEMICONDUCTOR INC.**

**Date**

**July 25, 2001**

**Signature**

**Donald G. McIntyre**

**Title**

**Senior Vice President Human Resources,  
General Counsel and Secretary**

**FOR DEPARTMENTAL USE ONLY**

**Filed**

**JUL 30 2001**

## ASSIGNMENT

**COPY**

In consideration of one dollar and other good and valuable consideration, receipt of which is hereby acknowledged, Zarlink Semiconductor Inc. ("Assignor") whose post office address is 400 March Road, Ottawa, Ontario, Canada K2K 3H4 hereby sells, assigns and transfers to 1021 Technologies KK ("Assignee") whose post office address is 77-12 Gomyoji, Minami-Ku, Yokohama-city, Japan 232-0067 on an "as is" basis all its rights, title and interest to the extent that any such rights, title or interest may exist in and to the following thirteen (13) inventions entitled

**Timing Recovery With Minimum Jitter Movement**

**DMT Bit Allocation with Imperfect TEQ**

**A Simple Implementation of Turbo Decoder**

**Efficient Implementation of Large Size FFT**

**Method And Apparatus for Connecting Broadband Voice And Data Signals to Telephone Systems**

**Parallel Turbo Trellis-Coded Modulation**

**Turbo Trellis-Coded Modulation**

**Combination Reed-Solomon and Turbo Coding**

**Method and Apparatus for Connecting Broadband Voice and Data Signals to Telephone Systems**

**DMT Peak Reduction Without Affecting Transmission Signal**

**Flexible Bit Selection Using Turbo Trellis-Coded Modulation**

**Fast Fourier Transform Signal Processing****COPY****Protection of Subscriber Line Interface Circuits (SLICS) without Degradation in Longitudinal Balance**

which were the subject of certain patent applications and/or issued patents in certain countries as identified and listed in Schedule A attached hereto and forming part hereof together with any rights, title and interest in and to any patents which may be re-issued based upon such patent applications and/or issued patents identified and listed in Schedule A.

And Assignor also agrees to do all such lawful acts and to execute without further consideration such further assurances, assignments, applications and other instruments as may reasonably be required by Assignee at Assignee's expense to vest such patent applications and/or issued patents identified and listed in Schedule A in Assignee.

By this Assignment, Assignee acknowledges that it assumes all responsibility for such patent applications and/or issued patents identified and listed in Schedule A commencing on the date this Assignment is executed by the parties.

SIGNED at Ottawa, Ontario this 4<sup>th</sup> day of October, 2004.

**ZARLINK SEMICONDUCTOR INC.**

By: 

Name: Desmond Byrne

Title: Vice President, Legal

**STATEMENT OF WITNESS**

I, Gail Casselman, whose full post office address is 5 Glenmoriston Ave., Ottawa, Ontario K2L 2S3 was personally present and did see Desmond Byrne who is known to me, execute this Assignment.

By: 

(signature of witness)



COPY

SIGNED at Ottawa  
this 4<sup>th</sup> day of October, 2004.

1021 TECHNOLOGIES KK

By: [Signature]Name: Ping-Ya ZhaoPosition: CTO & VP R&D

## STATEMENT OF WITNESS

I, WENTAO LI, whose full post office address is 17 Portadown Crescent  
Kanata, ON, K2W 1E8  
was personally present and did see  
who is known to me, execute the above Assignment.

By: [Signature]  
(signature of witness)

SCHEDULE A**COPY**

Invention Title	Country	Date Filed	Application Serial No.	Patent No.
Timing Recovery with Minimum Jitter Movement	Great Britain	24-Oct-97		2330736
	France	19-Oct-98	9813231	
	US	30-Sep-98		6,138,244
DMT Bit Allocation with Imperfect TEQ	Great Britain	23-Dec-99		2357937
	US	20-Dec-00	09/739,979	
	China	23-Jun-02	817662.0	
	US	26-Feb-01	09/791,808	
A Simple Implementation of Turbo Decoder	US	31-Aug-01	09/942,628	
Efficient Implementation of Large Size FFT	China	04-Sep-01	1131035.9	
	US	12-Apr-01	09/832,980	
Method and Apparatus for Connecting Broadband Voice and Data Signals to Telephone Systems	Germany	24-Apr-01	101 20 197.4	
	US	01-May-00		6,757,859
Parallel Turbo Trellis-Coded Modulation	China	27-Apr-01	1115658.9	
	France	27-Apr-01	01 05784	
	US	01-May-00		6,671,327
Turbo Trellis-Coded Modulation	France	27-Apr-01	01 05783	
	Great Britain	10-Aug-00		2366159
Combination Reed-Solomon and Turbo Coding	US	10-Aug-01	09/925,485	
	Germany	09-Aug-01	10139116.1	
	France	10-Aug-01	01 10707	
	Great Britain	26-Jun-00		2364200
Method and Apparatus for Connecting Broadband Voice and Data Signals to Telephone Systems	US	21-Jun-01		6,674,845
	Germany	25-Jun-01	101 30 029.8	
	France	26-Jun-01	108389	
	US	01-Mar-02	10/085,061	
DMT Peak Reduction Without Affecting Transmission Signal	France	01-Mar-02	02 02603	
	Japan	01-Mar-02	2002-104528	
	Great Britain	23-Mar-01	107285.8	
Flexible Bit Selection Using Turbo Trellis-Coded Modulation	US	18-Mar-02	10/098,474	
	France	22-Mar-02	02 03602	

Oct 04, 2004

SCHEDULE A

COPY

Invention Title	Country	Date Filed	Application Serial No.	Patent No.
Fast Fourier Transform Signal Processing	US	30-Jan-03	10/353,983	
	Europe	30-Jan-03	3100197.7	
Protection of Subscriber Line Interface Circuits (SLICS) without Degradation in Longitudinal Balance	US	29-Jan-01	09/770,610	